

SUPPLEMENTARY APPENDIX

Table S1. Baseline characteristics of base sample and matched sample

Table S2. Logistic regression results of propensity score model to predict receipt of SARS-CoV-2 testing

Table S3. Association between ADT use and COVID-19 positivity and severity among prostate cancer patients

Table S1. Baseline characteristics of base sample and matched sample

	Base				Matched			
	Tested		Not tested		Case		Control	
Number of patients	248,264		6,002,153		246,087		1,230,435	
ADT (%)	3,088	(1.2)	25,224	(0.4)	3,057	(1.2)	6,272	(0.5)
Age (years) (%)								
Mean (SD)	63.0	(15.0)	62.6	(16.8)	63.0	(15.0)	63.0	(15.0)
< 45	34,831	(14)	1,101,250	(18)	34,241	(14)	171,205	(14)
45-54	27,986	(11)	688,992	(11)	27,677	(11)	138,385	(11)
55-64	53,955	(22)	982,064	(16)	53,616	(22)	268,080	(22)
65-74	83,748	(34)	1,829,250	(30)	83,463	(34)	417,315	(34)
75-84	33,005	(13)	908,966	(15)	32,757	(13)	163,785	(13)
≥ 85	14,739	(6)	491,631	(8)	14,333	(6)	71,665	(6)
Race (%)								
White, non-Hispanic	152,651	(61)	4,016,395	(67)	152,601	(62)	763,005	(62)
White, Hispanic	15,260	(6)	284,011	(5)	14,848	(6)	74,240	(6)
Black	58,701	(24)	919,061	(15)	58,414	(24)	292,070	(24)
HI/PI	2,034	(1)	49,117	(1)	1,520	(1)	7,600	(1)
AI/AK	1,993	(1)	45,026	(1)	1,488	(1)	7,440	(1)
Asian	2,543	(1)	64,830	(1)	2,201	(1)	11,005	(1)

Unknown	15,082	(6)	623,713	(10)	15,015	(6)	75,075	(6)
Marital status (%)								
Married	113,540	(46)	3,397,095	(57)	112,531	(46)	669,013	(54)
Single	41,480	(17)	874,191	(15)	41,077	(17)	182,585	(15)
Separated or divorced	78,488	(32)	1,365,029	(23)	77,922	(32)	312,150	(25)
Widowed	12,927	(5)	251,705	(4)	12,751	(5)	48,705	(4)
Unknown	1,829	(1)	114,133	(2)	1,806	(1)	17,982	(1)
BMI (%)								
Mean (SD)	29.8	(6.4)	29.7	(5.8)	29.8	(6.4)	29.8	(5.9)
< 18.5	3,992	(2)	48,488	(1)	3,958	(2)	10,747	(1)
18.5-24.9	51,195	(21)	1,100,654	(18)	50,675	(21)	227,021	(18)
25.0-29.9	83,237	(34)	2,169,578	(36)	82,520	(34)	443,159	(36)
≥ 30	108,494	(44)	2,493,168	(42)	107,609	(44)	521,060	(42)
Unknown	1,346	(1)	190,265	(3)	1,325	(1)	28,448	(2)
Smoking status (%)								
Current	81,227	(33)	1,619,508	(27)	80,578	(33)	350,277	(28)
Former	132,108	(53)	2,970,410	(49)	130,969	(53)	608,266	(49)
Never	34,929	(14)	1,412,235	(24)	34,540	(14)	271,892	(22)
CCI Categories (%)								
Cerebrovascular disease	30,288	(12)	307,669	(5)	30,072	(12)	69,586	(6)
Congestive heart failure	39,713	(16)	307,897	(5)	39,421	(16)	71,017	(6)

Chronic pulmonary disease	67,640	(27)	758,051	(13)	67,200	(27)	166,445	(14)
Dementia	25,365	(10)	192,304	(3)	25,069	(10)	40,135	(3)
Diabetes without chronic complication	86,249	(35)	1,304,921	(22)	85,556	(35)	295,000	(24)
Diabetes with chronic complication	59,354	(24)	697,034	(12)	58,895	(24)	160,550	(13)
Hemiplegia or paraplegia	5,032	(2)	28,439	(0)	5,007	(2)	7,436	(1)
HIV/AIDS	3,048	(1)	22,628	(0)	3,029	(1)	6,966	(1)
Mild liver disease	30,345	(12)	269,707	(4)	30,120	(12)	69,213	(6)
Severe liver disease	15,095	(6)	110,360	(2)	14,996	(6)	31,710	(3)
Localized solid tumor	53,487	(22)	666,305	(11)	53,155	(22)	150,531	(12)
Metastatic solid tumor	6,115	(2)	30,613	(1)	6,078	(2)	7,609	(1)
Myocardial Infarction	15,474	(6)	104,337	(2)	15,376	(6)	25,004	(2)
Peptic ulcer disease	4,569	(2)	31,019	(1)	4,533	(2)	7,681	(1)
Peripheral vascular disease	37,885	(15)	363,926	(6)	37,622	(15)	81,429	(7)
Renal disease	55,037	(22)	541,912	(9)	54,600	(22)	122,707	(10)
Rheumatic disease	4,994	(2)	64,291	(1)	4,961	(2)	13,796	(1)

Medications (%)

ACE	59,233	(24)	960,899	(16)	58,825	(24)	219,513	(18)
ARB	25,454	(10)	384,629	(6)	25,265	(10)	86,733	(7)
Spironolactone	8,447	(3)	78,357	(1)	8,403	(3)	18,440	(1)

VHA utilization in the prior year

Outpatient visits (SD)	32.7	(36.2)	10.6	(15.5)	32.7	(36.2)	12.5	(17.8)
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Inpatient days (SD)	6.9 (28.8)	0.7 (7.2)	6.9 (28.7)	1.0 (8.5)
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Abbreviations: ADT, Androgen Deprivation Therapy; SD, Standard Deviation; BMI, Body Mass Index; CCI, Charlson Comorbidity

Index; ACE, Angiotensin-converting enzyme inhibitors; ARB, Angiotensin II Receptor Blockers; VHA, Veterans Health Administration.

Table S2. Logistic regression results of propensity score model to predict receipt of SARS-CoV-2 testing

	Unadjusted	Fully adjusted
	OR (95% CI)	OR (95% CI)
ADT	2.46 (2.35,2.56)	1.59 (1.52,1.67)
Age		0.99 (0.99,0.99)
Race		
White, non-Hispanic (Ref.)		
White, Hispanic		0.96 (0.94,0.98)
Black		0.79 (0.78,0.80)
Other		1.00 (0.97,1.03)
Unknown		1.27 (1.24,1.29)
Marital status		
Married (Ref.)		
Single		1.22 (1.20,1.24)
Separated or divorced		1.27 (1.26,1.28)
Widowed		1.34 (1.31,1.37)
Unknown		0.72 (0.68,0.76)
BMI		0.99 (0.99,1.00)
Smoking status		
Current (Ref.)		
Former		1.01 (1.00,1.02)
Never		0.82 (0.81,0.83)
Comorbidities		
Cerebrovascular disease		1.18 (1.16,1.20)
Congestive heart failure		1.30 (1.28,1.32)
Chronic pulmonary disease		1.45 (1.44,1.47)
Dementia		1.61 (1.57,1.64)

Diabetes without chronic complication	1.05	(1.04,1.07)
Diabetes with chronic complication	1.08	(1.06,1.09)
Hemiplegia or paraplegia	1.16	(1.11,1.21)
HIV/AIDS	1.40	(1.34,1.47)
Mild liver disease	1.35	(1.33,1.38)
Severe liver disease	0.95	(0.92,0.98)
Myocardial Infarction	1.22	(1.19,1.25)
Peptic ulcer disease	1.32	(1.27,1.38)
Peripheral vascular disease	1.23	(1.21,1.25)
Renal disease	1.30	(1.29,1.32)
Rheumatic disease	1.19	(1.15,1.23)

Medications

ACE	1.14	(1.13,1.15)
ARB	1.13	(1.11,1.15)
Spironolactone	1.00	(0.97,1.03)

VHA utilization in the prior year

Outpatient visit	1.03	(1.03,1.03)
Inpatient days	1.00	(1.00,1.00)

Abbreviations: ADT, Androgen Deprivation Therapy; SD, Standard Deviation; BMI, Body Mass

Index; ACE, Angiotensin-converting enzyme inhibitors; ARB, Angiotensin II Receptor Blockers;
VHA, Veterans Health Administration.

Table S3. Association between ADT use and SARS-CoV-2 positivity and COVID-19 severity among prostate cancer patients

Outcome	ADT		No ADT (reference)			OR (95% CI)	P-value
	Event (%)	No. Tested/Positive	Event (%)	No. Tested/Positive			
SARS-CoV-2 positivity	149 (8)	1,908	1228 (10)	12,741	0.85 (0.77,0.94)	0.002	
Severe COVID-19*	42 (22)	189	316 (23)	1,346	0.97 (0.65,1.45)	0.893	

Abbreviations: ADT, Androgen Deprivation Therapy; SARS-CoV-2, Severe acute respiratory syndrome coronavirus 2; COVID-19, Coronavirus Disease 2019.

*Severe COVID-19 is defined as ICU admission, mechanical ventilation, or death in the 60 days following SARS-CoV-2 positivity.